

Productivism, Vocational and Professional Education, and the Ecological Question

Damon Anderson

Received: 10 December 2007 / Accepted: 25 February 2008 /

Published online: 1 April 2008

© Springer Science + Business Media B.V. 2008

Abstract As the major supplier of skilled and certified labour, vocational and professional education (VPE) fuels the engine of economic growth. As such, it is directly implicated in the reproduction of productivism, the globally dominant ethos which presupposes that economic growth and paid work are permanent and necessary features of human existence, regardless of their consequences. This paper proposes that, in an era of eco-social risk, it is necessary to interrogate the truth-claims and normative assumptions that systematically configure VPE and its subjects for productivism. The role of productivism in the historical formation of VPE as an institution, and its constitutive effects on VPE policy and practice, are examined. In light of a critique of the logic and assumptions that underpin contemporary constructions of VPE, it is argued that productivism no longer provides a legitimate or sustainable basis for VPE. By problematizing the universal truths of productivism, it becomes possible to re-imagine VPE for alternative, post-productivist futures.

Keywords Climate change · Economic growth · Neoliberalism · Sustainable development · Vocationalism · Work

Introduction

At a national conference on the role of the Australian Technical and Further Education (TAFE) system in 1977, McKenzie criticized its predominantly instrumental-economic approach to workforce development. In his view, the narrow labour market orientation of TAFE led to neglect of the environmental impact of industrial and technological practices, and also the need to develop an environmentally literate workforce:

In an era when the principle of growth for growth's sake is under close examination educational institutions which contribute in a very direct way to the

D. Anderson (✉)

Centre for Work and Learning Studies, Monash University, Victoria 3800, Australia
e-mail: damon.anderson@education.monash.edu.au

expansion of industrial society and the assault on resources and environment have a grave responsibility to actively participate in such an examination. Such an examination must be a feature of the institutions themselves, and of the courses they offer. (McKenzie 1979, p.83)

Over the subsequent three decades, the human race has continued to somnambulate into an ecological crisis of its own making, seemingly oblivious to the perilous landscape it now inhabits. With serious and potentially intractable environmental problems already present or looming large on the horizon, the human species has exposed itself and all life forms to an increasingly precarious future. Alongside other key social institutions, vocational and professional education (VPE) bears significant responsibility for this situation. In profound and pervasive ways, VPE uncritically mirrors the dominant logic of industrial society and produces its subjects as compliant and compulsive agents of economic growth, largely inured to the environmental consequences of their habitual behaviours. Located at the interface between education, the labour market and civil society, VPE performs a crucial role in the constitution, population and legitimization of the vocations and professions, the main generators of economic growth. Accordingly, VPE has a critical obligation to help awaken and alert humanity to its predicament for its fate will ultimately depend upon the collective capacity of humans to see their life practices through new lenses, and to critique and transform them in ecologically sensitive and sustainable directions.

VPE is a large and amorphous sphere of provision that includes initial, continuing and higher vocational, technical and professional education and training. In developed countries, accredited vocational and technical education (including off-the job components of trade training) is provided by secondary schools and more generally by a range of post-secondary providers, such as vocational colleges, technical and further education institutes, polytechnics and technological institutes. Industry associations, unions, voluntary organizations and community education centres are also often involved in vocational education. Most programs offered by these institutions lead to qualifications at certificate and diploma levels, and in some cases also licensure or registration to practice. In developing countries, vocational programs are delivered generally at an initial, and often only pre-employment, level by secondary schools and in some cases technical and vocational training colleges. In both developed and developing countries, universities are the major providers of undergraduate and postgraduate education for the professions; although some vocational education providers also offer degree-level programs.¹ VPE provision in both developed and developing countries is considered below, although less so the latter due to the more limited availability of research.

The enigmatic identity and fluid status of VPE alluded to above is reflected in the lack of clear and consistent conceptions, definitions and terminology for identifying and distinguishing one form and level from another. Where the line should be drawn between 'vocational', 'technical' and 'professional' education is often unclear and differs between countries. Moreover, it is a line often crossed as various occupations

¹ For example, degree-level qualifications are awarded by vocational universities in China, Finland, the Netherlands and the UK, *Fachhochschulen* in Germany, and some technical institutes in Australia and New Zealand. Increasingly VPE programs are also offered online, and in the workplace.

migrate from the ‘vocational’ lowlands to the ‘professional’ highlands; as law, medicine, engineering, architecture, social work and education have done over the past century or so. Grubb and Lazerson (2005) suggest that professional education in North America is essentially higher education (in its traditional liberal arts form) converted into occupational education, albeit with loftier purposes and more social cachet than courses for tradespersons and technicians. Sectoral boundaries and designations reflect historical accommodations to power relations, and what counts as ‘vocational’, ‘technical’ or ‘professional’ knowledge in any place at any one time is socially constructed, culturally embedded and subject to change.² Nonetheless, the broad commonality of purposes in professional and vocational education permits one to speak of both in one breath. Regardless of the level, institutional form or national context of provision, both professional and vocational education are primarily oriented towards the initial preparation or further development of people for paid employment in occupations in the formal economy.

The central proposition advanced in this paper is that, in the context of post-industrial risk society characterized by manufactured uncertainty and global ecological crisis, it is necessary to interrogate the truth-claims and normative assumptions on which VPE resides as a prelude to re-imagining itself for alternative futures. The paper begins by examining a seminal report on climate change and locating it within the conceptual frame of post-industrial risk society. The next section defines the globally dominant ethos and discourse of ‘productivism’, which presupposes that economic growth and work (as paid employment) are permanent and necessary features of human existence, regardless of their adverse impact and consequences; social, cultural and environmental. The role of productivism in the historical formation of VPE as an institution and its constitutive effects on current VPE policy and practice are then analyzed. In turn, the truth-claims and normative assumptions that underpin contemporary constructions of VPE are identified and critiqued. As Stevenson argues, although normative assumptions about the goals and purposes of education are rarely revealed,

these assumptions are important, and should be made manifest for explicit analysis. They are certainly important when they become powerful in their influence on educational activity and on the knowledge that learners take away from those activities. (1994, p.102)

In light of this critique, it is argued that productivism and its inherent logic and truth-claims no longer constitute a rational or legitimate basis for defining the nature and purposes of VPE. This suggests that a post-productivist vision of VPE is required; one in which productivism is superseded by a new ethos that rejects the untenable myth of perpetual economic growth and accepts ecologically sustainable development as the bedrock of VPE.

² For example, in the European Union higher education has been explicitly defined as a part of vocational training by the European Court of Justice (ECJ), which ruled that “any form of education which prepares for a qualification for a particular profession, trade or employment or which provides the necessary training and skills for such a profession, trade or employment is vocational training, whatever the age and the level of training of the pupils or students, and even if the training programme includes an element of general education” (ECJ Case 293/83 Gravier v. City of Liège, Paragraph 30, cited in Hackl 2001, p.9).

The arguments presented below are largely conceptual and necessarily so in a field that is nascent and in need of substantial theorization if debates about VPE policy and practice are to be framed and informed by reflexive understandings of the problems at hand. Eclectic in approach, this paper draws upon diverse bodies of theory and research to explore concepts that may at first sight seem unrelated. Elements of new critical sociology, neomarxist political economy and poststructural discourse theory are synthesized and a transdisciplinary and comparative approach is deployed, drawing upon international historical, philosophical, sociological and policy studies. A hybrid methodology is justified on the grounds that we face a historically unprecedented rupture that calls for open, multiperspectival and unconventional thinking. In particular, this paper aims to unsettle prevailing conceptions of VPE, including its role, purposes and relationship to work, life and ecology, as a means to suggest new ways of seeing VPE in contemporary times. The arguments herein are provisional in nature and will continue to evolve as knowledge and understanding of the field expands.

Stern and Risk Society

On 30 October 2006, a stern warning was broadcast to the human race:

The scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response ... Climate change ... is the greatest and widest-ranging market failure ever seen. (Stern 2006, p.i)

Drawing on an extensive body of research, the Stern Review (2006) on the economics of climate change concluded that climate change is “*global* in its causes and consequences”; its impacts are “*long-term and persistent*”; “*uncertainties and risks* in the economic impacts are pervasive” and there is “a serious risk of major, irreversible change with *non-marginal economic effects*” (p.23).³ Speaking with the discursive authority of two powerful bodies of disciplinary knowledge, science and economics, the Stern Review has decisively and irrevocably altered the terms of debate about the future directions of economic development. After Stern, there is no alternative to more sustainable modes of development “as the consequences of climate change ... can no longer be avoided” (p.i), if current modes persist.

Although the efficacy of its prescription is likely to be debated extensively, the Stern Review’s diagnosis suggests that the threshold where current development practices are no longer sustainable has been reached, if not already breached. In short, the human race cannot avoid facing the realization that immediate and collective action must be taken on a global scale to address the consequences of its own modes of existence, particularly by moving rapidly to a low carbon economy. Inaction or inadequate responses to the climate change crisis, Stern warns, could lead to economic and social disruption on a scale comparable to the Great Depression. Stern advises that new policies, new regulations, new technologies, new institutions

³ All emphases and parenthetical remarks in quotations throughout this paper are original, unless otherwise stated.

and new ethics, values and behavior are required to underpin and drive the transition to more sustainable modes of economic activity.⁴ Amplifying Stern's assessment, the 2007 *Global Environmental Outlook Year Book* of the United Nations Environment Programme states that "humanity's very survival" is at stake. Not only does environmental policy remain subordinate to economic growth in most countries, but environmental degradation is also undermining economic development and threatening all dimensions of human well-being; particularly in the poor South where the most vulnerable disproportionately bear the costs of global environmental degradation. If the negative environmental effects of human activities are to be mitigated and the goal of environmental justice advanced, "sustainable development will need to move from the periphery to the center of decision-making considerations" (UNEP 2007, p.7).

Stern's sobering message underscores the extent to which the future of industrial society is "overshadowed by the ecological question" (Beck 1996, p.31). It reflects the dawning realization that we live in a 'risk society', the advent of which Beck (1992, 1996) attributes to 'reflexive modernization': the increasing capacity of human agents to reflect self-critically on the social conditions and consequences of their own modes of existence. Reflexive modernization has led to the disturbing insight that the very scientific and technological innovations that have defined modernity, propelled industrialization and sustained the Enlightenment's promise of everlasting human progress and mastery of nature, have produced unpredictable and uncontrollable risks that are profoundly reshaping the future of humanity. Due to the proliferation of hazards produced in and by modern science, technology and industry, new themes like ecological safety, biotechnological threats, labour market flexibility and social insecurity have emerged as core dilemmas in post-industrial risk society; themes that are explored in more depth later. The axis of social problems has shifted from wealth production and inequality to the administration and distribution of socio-biological and ecological hazards and risks which, ironically, "cannot (adequately) be addressed and overcome in the systems of industrial society" (Beck 1996, p.28). Inequality remains a central problem, but is also now a question of environmental justice. While the problematics of industrial society were generally subject to temporal closure and open to redress within national boundaries, those of post-industrial risk society are global in scale and potentially irresolvable.

In a similar vein, Giddens (1994) characterizes the condition of modernity as one of 'manufactured uncertainty', in which humanity is faced with risks that differ in origin, nature and consequences from those in any preceding era. Giddens links the emergence of manufactured uncertainty and its attendant social, biological and

⁴ A subsequent report by the Intergovernmental Panel on Climate Change (IPCC 2007) adds further scientific weight and urgency to Stern's assessment. It finds that evidence of human-induced global warming since pre-industrial times is 'unequivocal', with global greenhouse gas (GHG) emissions increasing by 70 per cent between 1970 and 2004. Despite 'current climate change mitigation policies and related sustainable development practices, GHG emissions will continue to grow over the next few decades' (p.6), due to human activities. As the threshold of un/sustainability is unknowable in advance, the precautionary principle must prevail; otherwise 'Anthropogenic warming could lead to some impacts that are abrupt or irreversible, depending upon the rate and magnitude of the climate change' (p.13). The IPCC concludes that 'more extensive adaptation than is currently occurring is required to reduce vulnerability to climate change' (p.14).

ecological risks to the historical spread of capitalism, industrialism, militarism and administrative surveillance. Science, technology and industry are “the very origins” of manufactured uncertainty. Like Beck, Giddens contends that “Living in an era of manufactured risk means confronting the fact that the ‘side-effects’ of technological innovations are side-effects no longer” (p.175). Reflexive modernization has revealed to the human race the paradoxical nature and consequences of its own life practices: “The paradox is that nature has been embraced only at the point of its disappearance” (Giddens 1994, p.206). The Stern Review, which highlights the risks and uncertainty we face as a result of human-induced climate change, is a historic instance and manifestation of reflexive modernization: of the human race coming to terms with the socially constructed conditions of its own potential finitude.⁵

Productivism

According to Giddens, the condition of manufactured uncertainty stems from modern industrial society over-reaching the limits of its own internal logic, manifested in productivism: “an ethos in which ‘work’, as paid employment, has been separated out in a clear-cut way from other domains of life ... and where mechanisms of economic development substitute for personal growth, for the goal of living a happy life in harmony with others” (1994, pp.175, 247). Work as paid employment “expresses the primacy of ‘industry’”, defines “whether or not individuals feel worthwhile or socially valued”, and has become compulsive in character, crowding out and negating other human values and activities (p.175). Unpaid work in the home and informal economy is rendered invisible or peripheral at best. Following Weber’s (1930) analysis of the protestant work ethic and its central role in the historical development of western capitalism, Giddens suggests that productivism imposes both an economic and moral imperative to embrace the world of work; it not only provides a means of survival, but also acts as a “standard bearer of moral meaning” that compels individuals to partake in paid work or risk social isolation and psychological alienation.⁶ As a direct consequence of the capitalist imperative for unfettered economic growth, productivism presupposes the continuous production and consumption of goods and services. Productivism stimulates, and is sustained by, the obsessive desire to accumulate economic wealth and material possessions as ends in themselves, and in the absence of any consideration of the natural sources or costs and consequences of production and

⁵ Australian scientist and conservationist, Tim Flannery (2007, p.270) observes that “Around September 2006 ... a huge shift in public sentiment towards climate change occurred ... news from Australia, the US and even China confirmed that the shift was instantaneous, decisive, deep-rooted and from all quarters”. He identifies the Stern Review as a major catalyst, although why “humanity—across many cultures, regions and languages—was receptive to the message at this particular time cannot be easily explained” (p.271). The nature and causes of this global shift in public consciousness deserve close investigation.

⁶ Productivism differs from ‘productivity’, which in economic terms refers to the quantity of output produced per unit of input (e.g. labour hours); but productivity can also refer to the creation of something new or valuable for non-economic reasons. Freed from any associations to productivism, productivity can promote individual autonomy and well-being as it “stands opposed to compulsiveness and to dependency, not only in work but in other areas, including personal life” (Giddens 1994, p.180).

consumption. Although the negative effects of some ‘dirty’ modes of production have been recognized in recent years, consumption, “in contrast, is almost universally seen as a good—indeed, increasingly it is the primary goal of national economic policy” (p.163).⁷

The rise of productivism as the touchstone of modern social life is linked to the emergence of “*an internally referential system of knowledge and power ... humanly structured systems whose motive power and dynamics derive from socially organized knowledge-claims (generated by science, technology and economics) rather than from influences exogenous to human activity*” (Giddens 1991, p.144, parenthetic remark added). Giddens’ notion of internal referentiality suggests that productivism can also be understood as a discourse, an assemblage of “practices that systematically form the objects of which they speak” (Foucault 1972, p.49), thereby constituting the conditions in which social reality can be named, ordered, understood and acted upon. As systems of knowledge joined to power, discourses are constituted through political struggles over meaning, and are at once the object and instrument of power. Central to discursive formations are disciplines, institutionalized bodies of knowledge that generate, systematize and represent what is knowable, what is true, who is authorized to dispense truth (e.g. professions), under what circumstances and in what terms. Due to their powerful constitutive effects, discourses and their embedded truth-claims assume the status of universal truths that systematically (re)produce social reality in their own image, thereby concealing their own invention and the interests they serve. Productivism is one such discourse, manufactured and mobilized through the extensive webs of disciplinary knowledge, truth-claims and techniques of science, technology and economics that permeate and produce industrial society. Nonetheless, while its logic is ubiquitous and its effects pervasive, productivism is neither monolithic nor uniform in character; it is always mediated and inflected by the particular histories, cultures and institutions of the spaces it penetrates. The origins, operation and effects of productivism as hegemonic discourse in relation to VPE are examined below.

If the human species is to avoid the fate of self-dissolution, Giddens argues, the logic of productivism must be actively and widely problematized. In his estimation, the answer to the contemporary dilemma of ‘how much is enough?’ relates only partially to the resource limits of nature. It can be fully addressed only by questioning the ethos of productivism and its associated life practices: the continuously expanding circuits of production and consumption. By challenging the rationality of productivism, it becomes possible to undercut the meaning of work as paid employment, and thereby create “pressure to realize and develop other life values” (p.163). The main object of critiquing productivism is to expose the obsessive and irrational nature of commodified work, although “its guiding positive aim is the expansion of human happiness” (p.247). While it is necessary to reject “‘overdevelopment’ leading to suboptimal economic, social or cultural consequences” (p.101) and to weaken the link between work and economic reason, this does

⁷ Consumption in this sense implies production, which necessarily also involves consumption, waste and depletion of natural resources.

not mean the end of economic development. Reducing the gaping chasm between the rich North and poor South is both an ethical and environmental imperative:

there isn't any alternative *to* development, at least in the poorer regions of the world, if 'development' is understood as economic growth. But there are certainly different modes of development, with differing strategies and objectives. (Giddens 1994, pp.174–5)

What forms alternative modes of development should take, which (and whose) objectives and strategies should be pursued, and how (and indeed whether) the transition can be navigated effectively, remain open questions.

Productivism and VPE

Productivism, as both ethos and discourse, has been omnipresent and omnipotent in VPE since its conception. As the principal supplier of skilled and certified labour to industry, business and government, VPE is the servant of productivism and has been, and continues to be, directly implicated in its reproduction. It is instructive, therefore, to briefly examine the historical relationship between productivism and VPE, as the resulting insights provide a basis for unravelling and rethinking taken-for-granted assumptions and practices in VPE.

VPE first emerged as a distinct educational form in response to the radically new social, economic, technological and cultural conditions created by the industrial revolutions of the late eighteenth and nineteenth centuries in Britain, Western Europe and North America (Green 1990; Greinert 2004; Kliebard 1999). Pre-industrial systems of production, which were typically small scale, decentralized and family based, and comprised farm work, domestic handicrafts and other cottage industries, were gradually overshadowed by larger scale industries dominated by entrepreneurial owners of capital (Watkins 1987). The quest for efficiency and profit was the principal dynamic of the new industrial mode of production. Work was progressively individualized, routinized, disciplined and commodified as paid employment linked to standardized work-time. In pre-industrial societies, work had been an integral part of daily life: a social activity that was largely autonomous, irregular, co-operative, integrated with leisure and family life, and “dominated by agrarian rhythms, free of haste, careless of exactitude, unconcerned by productivity” (Le Goff 1980, cited in Watkins 1987, p.1). For artisans, journeymen, farmers and others, work was “a ‘way of life’, not external to or separate from it” (Gorz 1989, p.16). But with the arrival of the machine and the development of mass production systems allied to new capitalist relations of production, all this changed:

Productive activity was cut off from its meaning, its motivations and its object and became simply a *means* of earning a wage. It ceased to be part of life and became the *means* of ‘earning a living’. (Gorz 1989, pp.21–2)

As Giddens suggests, this new ideology of work is central to the ethos of productivism that first took root during the late eighteenth and nineteenth centuries and prevails to this day, although in a more intensified form. As the second phase of the industrial revolution commenced and the development of the factory system

proceeded apace during the latter half of the nineteenth century, ‘skill’ and ‘industrial training’ were viewed in the evolving discourse of economics as not only key elements of, but also preconditions for, increased efficiency, growth and wealth creation (Marshall [1890]1949). Although technical and vocational skills were initially developed informally in the workplace, industrial training became more formalized and institutionalized in the North from the late nineteenth century (Green 1990, 1997; Greinert 2005).

Over the course of the twentieth century, productivism and industrial training were progressively drawn together into a more direct and interdependent, if distinctly lopsided, relationship. As Grubb and Lazerson (2004, preface) argue in their historical study of education in North America, “the evolution of economic purposes for schooling was the single most important educational development of the twentieth century”. The moral, civic and intellectual purposes of education were gradually displaced by ‘vocationalism’, which “emphasizes preparation for employment” (p.5) and “is responsive to external demands—in this case, for the ‘essential skills employers want’.” (p.3) The process of vocationalization initially embraced secondary education, and then extended into higher education towards the end of the nineteenth century with the establishment of university-based professional schools (e.g., in medicine, law, business and education). By the close of the twentieth century, higher education had become “the most thoroughly vocationalized level of schooling in our system” (Grubb 2005, p.2).⁸

Enshrined as ‘Education Gospel’ not only in North America, but also across the globe, vocationalism has been framed in recent times as a necessary response by national governments to the exigencies of globalization:

In virtually all developed countries, and many transitional countries as well, an orthodoxy ... has emerged. I call this orthodoxy the Education Gospel because it expresses a faith in education as the principal route to salvation—as the source of economic growth and competitiveness, the mechanism of individual advancement, the solution to poverty and social exclusion. (Grubb 2004, p.1)

Citing the OECD (1989a, 1998), Hackl (2001, p.5) notes that higher education in Europe has been progressively vocationalized along similar lines:

Throughout the last four decades, the most important curricular development in European higher education has been a shift from an academic and professional orientation to a focus on the needs of industry and the employment sector. This shift has been propelled by the manpower (sic) approach ... The establishment of a non-university sector has promoted the creation of more practice-related, vocationally-oriented courses. And, since the 1980s, the vocational orientation has spilled over into universities.

⁸ Historically, productivism was (and is) experienced differentially by class, gender, race and geography. As one reviewer noted, feminist scholars have been critiquing dominant, patriarchal constructs of work, vocation and skills and developing ecofeminist ideas for many years (c.f. Jackson 1991; Kelly and Slaughter 1991; Warren 1997). Although not possible in a paper of this length, such important differences and critiques warrant analysis in relation to productivism, VPE and post-productivist futures.

In both Europe and North America, vocationalization is linked to the massification and diversification of higher education (Grubb and Lazerson 2005; Hackl 2001).

The influence of productivism and vocationalism spread from the advanced industrial nations of the North into the South as a result of historical colonization and post-colonial development programs. As Middleton et al. (1993) state in their World Bank report, *Skills for Productivity: Vocational Education and Training in Developing Countries*, after the demise of colonialism, bilateral and multilateral aid agencies financed development projects on the premise that “Economic growth was to be generated through accelerated industrialization, and this in turn would require a supply of skilled workers and technicians” (p.37). Driven by the overriding objective to “increase their productivity and expand their economic activity” (Middleton et al. 1993, p.19), VPE, labour market and economic policies in developing countries remain in a state of almost continuous review and reform in line with the objectives and specifications of international financial institutions and aid agencies, which typically reflect Western paradigms of economic development, industrialization and work. In Africa and other developing regions, development policies and programs have mirrored the dominant Western values and strategies of ‘modernization’, with the result that “environmental protection and sustainability became distant afterthoughts” (Okolie 2003, p.241). Like technical and vocational education in the South (Singh 2001; Watson 1994), higher education “has played a central, though not exclusive, role in centring and universalizing Eurocentric knowledges and ways of knowing, and marginalizing and delegitimizing others, including traditional African ones” (Okolie 2003, p.255).

Neoliberalism, Human Capital Theory and CBET

Over the past three decades, education and training have been increasingly subsumed within the discursive frame of economic rationality and subordinated to the demands of economic growth and industrial production, due to the ascendancy of neoliberalism and neoclassical economics (Anderson et al. 2004; Green 1997, 1999; Halsey et al. 1997; Marginson 1993, 1997; Okolie 2003). Neoliberal ideology has spawned a plethora of political-economic programs around the world which aim, in short, to shrink the state, expand private enterprise and extend market relations into non-economic domains and non-commodified spheres of human and non-human life (Harvey 2005). In the context of national economic crises, endemic unemployment and growing poverty, the World Bank, International Monetary Fund and OECD governments mobilized narratives of globalization to justify processes of micro-economic reform during the 1980s and 1990s, which aimed to promote ‘structural adjustment’ and economic growth through the ‘modernization’ of industry and education systems. Central to such processes are the concept of ‘skill formation’ and the closer alignment of education and training to productivist interests and objectives (Bennell et al. 1999; Jones 1997; Marginson 1993; OECD 1987). Neoliberal reforms to VPE include the privatization, commercialization and marketization of provision and financing, with the aim of increasing its efficiency and responsiveness to labour market demand. To this end, market mechanisms (including competitive tendering,

contracting, fee charging and vouchers) have been inserted into VPE to stimulate competition among public and private providers, and empower ‘users’ or ‘clients’ to exercise more choice and influence over ‘suppliers’. The OECD and the World Bank have been strong advocates (as well as, in the latter case, an enthusiastic architect) of market-based and demand-driven approaches to VPE, which have now been adopted in many developed and developing countries.⁹

A key feature of neoliberal policies in education has been the coupling of market reforms with human capital theory, which posits the existence of a virtuous circle between skill formation, industrial productivity and economic growth, leading to increased employment opportunities and individual earnings (Marginson 1993; Rose 2003). According to human capital theory, VPE is a private investment in

a process that improves an individual’s skills and abilities, and therefore his or her productivity, in the workplace. Thus, to the extent that it raises the skills of workers, and therefore productivity, greater educational attainment is expected to increase an economy’s output of goods and services and, more generally, to contribute to the process of economic development. (Middleton et al. 1993, p.39)

Human capital theory views not only technicians, tradespersons, and labourers, but also professionals as human resources in processes of economic production. With near-universal currency in policy circles despite its lack of conclusive empirical grounding, human capital theory is “probably the theory of education which has had the most influence on contemporary education policies” (Marginson 1993, p.21). As economic markets become more global and competitive, and with less stable employment and social protection in the wake of neoliberal restructuring, individuals are being pressed to invest more in their own human capital development and VPE systems are under greater pressure to increase their output of more ‘skilled and flexible’, ‘productive’ and ‘employable’ workers (ILO 2002; OECD 1996, 2002).

One of the main effects of human capital theory has been a stronger emphasis on the instrumental–economic value of the knowledge, skills and attitudes acquired through formal education and training. Most vocational education systems in the South and North now conform to a generic neo-Taylorist model of curriculum design based on technical–rational ‘training needs analyses’ and ‘job-profile research’ in which the principal, if not sole, frame of reference is the workplace:

Vocational and technical education and vocational training are by design intended to develop skills that can be used in a specific occupation or job. The objectives and the content of curricula in these programs are derived from occupational standards or, more directly, from analysis of the tasks that are to be carried out on the job. (Middleton et al. 1993, p.2)

⁹ For information and analyses of markets for post-secondary education and training in developed countries, see Anderson (2006), Beach and Carlson (2004), Elson-Rogers and Westphalen (2000), Finkelstein and Grubb (2000), Levin (2001), Marginson (1993, 1997), OECD (2002), Teixeira et al. (2004), and West et al. (2000). For developing countries, see Atchoarena (1998), Bennell (1996), Bennell et al. (1999), de Moura Castro (1998, 2001), Gao et al. (2006), Gill et al. (2000), Middleton et al. (1993), Mok (1999), and the World Bank (1991).

An even more explicitly human capital model of curriculum, competency-based education and training (CBET), has been promoted in recent years as the global benchmark for vocational curriculum (ILO 2004; World Bank 1991), and is now utilized in many developed and developing countries (Argüelles and Gonczi 2000; ILO 2007; Mulder et al. 2007; Weigal et al. 2007; Winterton et al. 2005). CBET is based on the notion of employment-related competence, which is “seen as a form of human capital and a source of economic growth” (Marginson 1993, p.149). More specifically, “the concept of competence is related to ... capability, employability, career development, the alignment of education and work” (Weigal et al. 2007, p.65). By training and assessing VPE learners against standards that are referenced to existing workplace practices and performance criteria, and often determined and/or mandated by industry parties, CBET strengthens the relationship between learning and work and binds VPE more tightly to the labour market. As van der Klink et al. (2007, p.73) note in relation to vocational higher education, “One of the pillars of a competence-based approach ... is the match between the content and the skills demanded by business”. While there are different models of competence and CBET in circulation, including ‘behaviorist’, ‘generic’, ‘constructivist’ and ‘interpretative’ approaches (Mulder et al. 2007; van der Klink et al. 2007; Weigal et al. 2007), the ‘behaviorist’ or ‘rationalist’ model tends to “predominate in VET (vocational education and training) systems” (Winterton et al. 2005, p.53).

Although higher education effectively resisted colonization by CBET until the mid-1990s (Hyland 1994; Marginson 1993), significant new incursions are being made through the adoption of ‘learning outcomes’ in undergraduate courses and ‘national standards’ in postgraduate courses; and via the language of ‘generic’/‘core’/‘key’/‘essential’ skills, under the rubric of increasing graduate ‘employability’ (Bennett et al. 1999; Billing 2003; Harvey 2000; Whitston 1998). Other (mainly market) mechanisms are also being deployed by national governments to: steer professional and vocational education in economic directions; strengthen the education–industry nexus; and effect a shift to more demand-driven and vocationally-oriented course provision. In the European Union, for instance, “National governments have enhanced stronger links with the labour market through differentiation (creating new higher education institutions or a higher education sector outside of universities) and through financial incentives for and pressure on universities” (Hackl 2001, p.20).¹⁰

As a micro-technology of human capital theory, CBET prioritizes economic over social and cultural development and subordinates individual and community needs

¹⁰ Currently, in the context of the Bologna Process and Socrates program, the European Commission (EC) is supporting the ‘Tuning Educational Structures in Europe’ initiative, which aims to integrate competences as ‘learning outcomes’ into higher education. The competences are being developed in consultation with “the main stakeholders: universities, employers, professional associations, students, quality assurance and accreditation agencies” (EC 2003). Although the EC describes the competences “as points of reference for curriculum design and evaluation, not as straightjackets”, the underlying intention is to establish “common curricula on the basis of agreed competences” as the platform for constructing a European credit transfer and qualifications framework to promote cross-border recognition, comparability and mobility. Few universities will be able to resist the logic of this trend “since, as resources become more scarce and competition increases in the higher education market, reputation and recognition are extremely important assets” (van der Klink et al. 2007, p.71). Inevitably, such trends in the European Union will have ripple effects in the global marketplace for professional education.

to those of industry. Regardless of their value in socio-cultural and environmental terms, only those skills and competencies that are required for work and by industry are deemed to be relevant, valuable and worthy of recognition in most CBET courses and credentials. Notwithstanding the frequent, though often perfunctory, references to the importance of developing social and citizenship skills and values, the CBET universe is a virtual space constituted by an economic calculus, disconnected from culture and context and peculiarly devoid of humanity and nature. In effect, CBET forges an even closer correspondence between VPE and productivism, and further isolates worker-learners from the natural-material conditions and consequences of production and consumption.

To summarize, VPE was historically constituted by the ethos and discourse of productivism. Born of the industrial revolution, VPE has since fuelled the engine of economic growth and expansion. The institution of VPE as “training for productive employment” (Middleton et al. 1993, p.37) became emblematic of, and indispensable to, industrial society during the course of the twentieth century; the “century of vocationalism, the century of professionalization, or (as economists might say) the century of human capital” (Goldin n.d., cited in Grubb and Lazerson 2004, p.4). With the rise of neoliberal hegemony from the 1970s onwards, VPE has been harnessed even more securely to the logic of economic growth and industrial production through processes of structural adjustment in advanced industrialized countries and via international aid programs in less developed countries. The confluence of human capital theory with CBET and market reforms has tightened the links between education, skill formation and economic production, and prioritized work (as paid employment) over other non-economic purposes and outcomes of VPE. In consequence, VPE has become both a container of and conduit for productivism.

Universal Truths: Training-For-Growth, Skills-For-Work

Like all social institutions, VPE is discursively constituted within a ‘regime of truth’, an ensemble of universal truths whose status as ‘truth’ is considered self-evident and beyond doubt, despite their arbitrary and contingent nature (Foucault 1980). As suggested by the preceding historical analysis, VPE is both a product and (re) producer of productivism as a regime of truth. VPE is enmeshed in the networks of power-knowledge relations that form productivism and construct human reality as a limited field of possibilities, in the process negating, displacing or obscuring alternative readings of reality. VPE authorizes, “accepts and makes function as true” (Foucault 1980, p.131) the discourse of productivism by actively and methodically producing, regulating and distributing its truth-claims: the necessity of unlimited economic growth as an end in itself, and paid work as the means to this end.

With neoliberalism on the ascent, the OECD report entitled *The Future of Vocational Education and Training* articulated with remarkable clarity and concision the two truth-claims and normative assumptions that underpin productivism and industrial society and form the invisible scaffold of contemporary constructions of VPE: “The economy *has to* produce goods and services, and people *have to* have jobs” (1982, p.21, emphases added). An extension of the logic behind this

‘commonsense’ statement, VPE policy and practice in most developed and developing countries are now premised on two fundamental assumptions which have acquired the status of self-evident truths that are reproduced systematically in and by VPE institutions and programs; namely that the principal, if not sole, purposes of VPE are to: promote economic growth by developing the human resources required by industry to increase productivity and profit (training-for-growth); and produce graduates with skills and competencies for work in order to increase their economic output and employability (skills-for-work). By virtue of these specific assumptions, VPE is locked into the self-enclosed and self-sustaining logic of productivism.

Consistent with human capital theory and the economic rationalization of education, these two normative assumptions are joined together in official policy discourse by the claim that the needs of industry and individuals are converging as a consequence of globalization and workplace change (OECD 1989b). The metaphor of convergence is used as a discursive device to justify subordinating the needs and interests of worker–learners to those of industry and enterprises or, more specifically, employers. As claimed in a paper for the ILO, “there is today an unprecedented convergence of interests between employers and employees in relation to the skills of the latter” (de Silva 1997). Not only do their needs and interests supposedly coincide, but enterprises/employers are also “the end-users of skills acquired through training” who “at the end of the day, create jobs for individuals” (Australian National Training Authority 1996, p.7). By extension, VPE should therefore respond directly and primarily to the needs of industry/enterprises and employers in particular: “We must put employers’ needs for skills centre stage, managing the supply of training, skills and qualifications so that it responds directly to those needs” (UK Secretary of State for Education and Skills 2003, foreword, item 11). However, this conclusion rests upon the tendentious assertion that employer and employee needs are converging and the unwarranted assumption that all learners in VPE want the same skills that employers require; in all, a tenuous argument built on questionable premises.

The same logic and objective often underlie official calls for ‘enterprise education’ and an increasing convergence of general and vocational education by reformulating the curriculum in terms of ‘generic’/‘core’/‘key’/‘essential’ skills or competencies on the one hand, and ‘employment-related’ and ‘company/enterprise-specific’ skills or competencies on the other (Conference Board of Canada 2000; Finn 1991; UK National Council for Vocational Qualifications 1991; US Department of Labor 1991). Within the core-skills paradigm in the UK, for instance, ‘relevance’ is one of two “particularistic and selective” cultural criteria for defining the purpose and content of core skills (Green 1998, p.28). Relevance, in this context, means “predominantly relevance to future work roles—as defined by employers—rather than to future roles as citizens” (Green 1998, p.28). However, as Penn (1999, p.631) concludes in a study of stakeholder participation in decision-making relating to skills formation, “*different actors have differing perceptions and differing goals*”. Individual worker–learners’ perceptions of relevance should be neither equated with each other, nor conflated with those of employers. Yet this is precisely the intent and effect of the convergence metaphor. It fabricates an apparent reconciliation of the needs and interests of worker–learners and employers, so as to privilege the latter

over the former while simultaneously masking differences, tensions and conflicts. Thus, the metaphor of convergence performs the crucial discursive function of joining and legitimizing the two core truth-claims of productivism in VPE, and homologizing the logic and assumptions that constitute its structural-policy and cultural-curriculum domains.

Implicit in the policy framework, organization, management and culture of VPE institutions, and in the structure, content and delivery of VPE programs, the two axiomatic assumptions of skills-for-work and training-for-growth routinely shape and direct the formation of learner subjectivities. The selection of knowledge, skills and dispositions dispensed, rewarded and recorded by VPE curricula, assessment and credentials—in concert with the norms, values, orientations and relations embedded therein—serve to recreate and legitimize the types of human subjects (skilled and competent workers) and specific forms of subjectivity (compliant, flexible, adaptable, responsible, motivated, enterprising, self-managing, team-working, problem-solving) required by productivism and its social and economic institutions. VPE teachers, many of whom come from industry, are trained to produce graduates with the knowledge, skills, competencies and dispositions required for work. For them to do otherwise would call into question their own biographies, identities and expertise as industry practitioners and educators/trainers, and is therefore unthinkable for many. Teachers are still able to construct identities outside the norm, but their room to move is limited and resistance risks rejection.¹¹

From their position of relative powerlessness, VPE learners are unconsciously bound into the discursive logic that pre-structures the study choices and vocational and professional identities available to them. In the process, they are denied access to alternative and unauthorized ways of learning, working and living, and making sense of their life-worlds and futures.¹² Admittedly, learner subjectivities cannot be simply read off official curriculum documents and intended learning outcomes. Curriculum documents and intentions are recontextualized, reinterpreted and selectively experienced, often in unintended ways, by VPE actors. As Cho and Apple (1998, p.287) observe, “although education is, at least partly, a process of producing certain forms of subjectivity ... the transformation of concrete individuals into concrete subjects (being commercial high-school students, or being clerical or factory workers) is achieved in a complex, unstable, and often contradictory way”. The

¹¹ Teacher resistance to dominant institutional norms and its consequences are well illustrated in Angus and Seddon (2000), Beach and Carlson (2004), and Clark (2003, p.2) who notes that for TAFE teachers, “To challenge the primacy of the economic was to be branded out of date, a dinosaur incapable of adapting to a rapidly changing world.”

¹² Eurocentric subjectivities are reproduced in developing countries through the asymmetrical nature of power relations and knowledge production and dissemination that stems from their intellectual, scientific and financial dependency on international aid agencies and Western ‘experts’. As Okolie (2003, pp.247–248) notes, “programs in faculties of agriculture in African universities as well as colleges and universities of agriculture are typically organized along the lines of similar programs in Europe and America. They teach ‘modern’ agricultural practices, meaning the agricultural practices in EuroAmerican societies”. Not only does this result in the production of crops and agricultural practices that are often inappropriate and unsustainable in social, economic, technological and environmental terms. It also has adverse cultural and psychological effects on the indigenous population (including African scholars) by inducing deference to the ‘superior’ knowledge of their ‘benefactors’ and a rejection of their own traditional knowledges and ways of knowing (Okolie 2003).

process of developing and assessing key competencies and personal attributes is “necessarily a normalising exercise ... subject to refusal, resistance, contestation, or appropriation in various ways by educators, trainers and worker–learners alike” (Williams 2005, p.33). While there is no unbroken chain of causality between the intended, enacted and embodied curriculum, and although worker–learners can and do actively construct their own meanings and values, they do so within a restricted cultural field. The free play of meaning construction is delimited to a considerable degree by the existing repertoire of discursive resources and vocabularies. Furthermore, the structural articulations between the economy, employment, labour market and VPE, with credentials at the nexus, impose significant, real constraints on the scope for exercising choice, agency and autonomy. Worker–learners who transgress these boundaries put their own credibility, employment and economic security in jeopardy.

VPE and Truth Production

Cast within the ethos of productivism and ideological framework of neoliberalism, the institution of VPE is based on a narrow and instrumental view of life-worlds which reduces people and the environment to the status of human and natural resources for economic exploitation. Such a perspective overlooks the complex and interdependent nature of human existence, the source and meanings of which are inextricably linked to historical processes, social relations, cultural practices and natural–material conditions. VPE students are not only already or becoming workers. They are also human beings and citizens with a wide range of needs, relationships, duties, aspirations and interests beyond work; in the family, the local community, in civil society and the global environment. Over their life courses they raise and care for family members, consume goods and services, manage finances and households, experience unemployment and hardship, elect and overthrow governments, form unions and associations, participate in community and cultural affairs and ultimately rely on the fruits of nature for their day-to-day survival. Yet in VPE most learn only to labour and produce commodities.

This is not to deny that VPE often pursues goals and fulfils purposes other than training-for-growth and skills-for-work. Historically, technical and vocational education and training played a significant role in the promotion of state formation, nation-building and social cohesion across Europe, the UK and USA, although its primary function was to reproduce labour power for economic growth (Green 1990, 1997). Much current VPE provision is undertaken in the interests of promoting regional and local development through industry and community partnerships, and improving social equity and inclusiveness through the provision of access and ‘second chance’ programs and pathways for disadvantaged students. VPE has often achieved positive results on these and other accounts. However, such roles and objectives are almost universally viewed as being subsidiary to, and indeed ultimately dependent upon, the promotion of increased economic growth and individual employability (Grubb and Lazerson 2004). Outcomes are typically evaluated against human capital, not social equity, metrics (Middleton et al. 1993; OECD various years). Environmental concerns figure in natural resources and

environmental management courses in VPE. However, such concerns are generally subsumed and suffused by an anthropocentric logic that places nature on the altar of economy and in the service of industry, as in courses for mining, agriculture, forestry, fishing and tourism. Courses in environmental conservation, while more explicitly nature-oriented, tend to view ecology and economy as two distinct and separate domains.

As a major site of subjectivity formation, VPE performs a critical role in the production and legitimation of the universal truths of productivism and their immanent power-knowledge relations. It does so by leaving unstated and unquestioned the truth-claims, assumptions and interests that are inscribed in its policies, programs and practices and which shape what is taught and learned in its lecture theatres, classrooms, laboratories and workshops, and in campus life. By representing productivism as the natural and inevitable order of things, VPE places the corresponding truth-claims and normative assumptions beyond question. In consequence, learners in VPE are reproduced as agents of productivism, lacking a reflexive understanding of their roles as ecological actors, and of the negative environmental impact and consequences of their producing and consuming skills, values and behaviours.

Researchers of VPE, including those with critical stances on social, cultural and political-economic questions (this author included), are also often blind to these assumptions: they, too, have become embedded in the discourse of productivism, and seem oblivious to its constitutive effects on their work. In this regard, Teichler (1999) has noted the tendency for research on the relationships between higher education and work to be shaped, explicitly or implicitly, by the normative biases prevalent in policy circles and public debate. As “an agent of subordination of higher education to the employment system”, such research is often unable to “observe and address changes ... which are visible at the horizon and are likely to occur in the future” (Teichler 1999, p.169). Significantly, one such change is the trend “from regular employment towards increased precarious or flexible employment” (Teichler 1999, p.185).¹³ As universal truths, training-for-growth and skills-for-work are deeply ingrained in the prevailing regime of truth and the discursive structure of vocational and professional education. Because such truth-claims seem “so essential to the structure and functioning of our society” (Foucault 1980, p.132), they tend to go unrecognized and uncriticized. Undoubtedly, these two assumptions *are* essential to the processes of economic production and social reproduction, and of working and learning, in *industrial society*—but only in a historically contingent sense, not forever, as suggested by the earlier genealogy of work. Nonetheless, it is difficult for

¹³ A keyword search of the fifty-four volumes of *Higher Education* to date found only two papers dedicated to ‘sustainable development’ (Okolie 2003; Reid and Petocz 2006). Passing references to sustainability are made in St George (2006) and Winberg (2006). Other than Teichler (1999), the implications of changing work and employment patterns were the topic of discussion in only four papers (Tynjälä et al. 2003; Kivinen and Ahola 1999; Suchodolski 1974; and Greenaway 1973). In an international journal devoted to higher education, these findings are surprising given the prominence of sustainable development in public discourse and the vocationalization of higher education. Adding further weight to Teichler’s contention, Boughton (2007, p.162) highlights the reproductive nature of workplace learning research, most of which focuses “on how workers learn what they need to know in order to produce more efficiently and effectively the products and services which generate wealth for the industry in which they are engaged”. Moreover, “The ‘left wing’ of workplace learning research has so far mounted a critique which remains largely within assumptions laid out by capital itself” (p.162).

VPE researchers to proceed and make sense without working from these assumptions. Moreover, the policy priorities and funding decisions of aid agencies and governments systematically orient research on VPE towards productivist ends. Researchers who transact in the language of productivism attract funding and recognition; those who do not are likely to be marginalized and ignored.¹⁴

Thus, productivist discourse, constantly circulated through the disciplinary power-knowledge network of science, technology and economics, is normalized through the everyday practices and procedures of industry, government, research and education. Its truth-claims are accepted as common sense, and its economic rationality methodically frames and constrains what is thinkable, possible and doable. Productivism has prevailed and its regime of truth has remained seemingly impregnable, despite the magnification of the ecological question since the 1960s. As Foucault (1972, pp.44–5) observes, “one cannot speak of anything at any time; it is not easy to say something new; it is not enough for us to open our eyes, to pay attention, or to be aware, for new objects suddenly to light up and emerge out of the ground”. For this to occur, the discursive conditions for the exteriorization of the ecological question as the central problematic of contemporary risk society must be present.

In spite of their apparent ineluctability and immutability, neither universal truths nor the institutions and practices through which they are reproduced are immune to challenge or change. While “people accept as truth, as evidence, some themes which have been built up at a certain moment during history ... this so-called evidence can be criticized and destroyed” (Foucault 1988, p.10). By exposing the arbitrariness and contingency of universal truths and revealing the interests they represent, it then becomes possible to constitute a new “politics of truth”. And despite the powerful disciplinary effects of dominant discourses, regulation and control of the population is never absolute: resistance is the “compatriot” of discipline. For Foucault (1982, p.216), the way out of modern power structures is “to promote new forms of subjectivity through refusal of this kind of individuality which has been imposed on us”.

Voices from the margins have been problematizing the truth-claims of productivism in VPE for some time (e.g. Coulter and Goodson 1993; Dipppo 1998; Kell 1992; Kincheloe 1995; Orr 1992; Stevenson 1993, 1994; Watson 1994), but to little or no apparent avail. Paradoxically, through its deployment of scientific and

¹⁴ In an illuminating critique of the hegemonic nature of knowledge production in Africa, Okolie (2003, p.247) reveals the strong logocentric influence exerted by Western multilateral aid agencies and their ‘expert’ consultants over African and other development researchers. In the absence of any independent scrutiny or accountability, and driven by the logic of self-legitimization and expansion, the World Bank “actually tries to structure knowledge production to fit its vision of the world and buttress its lending at the same time”. Not only do the Bank’s “‘research’ results ... influence what African governments ‘choose’ as policy ... (but) [a]lso the Bank’s thinking, priorities and preferences influence the army of university-based researchers, who act as its consultants”. According to Okolie, African researchers rarely challenge the development theories, assumptions and objectives of such lenders, and typically accept the latter’s research agendas because they rely on Western sources for research funds, equipment and publication. Although not all researchers comply with the expectations of funding agencies, “the freedom to do otherwise is exercised within important constraints: at the very least the funding agency decides on priorities and typically approves only the proposals that address those priorities”. The present paper suggests that similar processes are at work in the South and North.

economic knowledge to examine current development modes, the Stern Review (2006) has destabilized the productivist regime of truth and potentially created the conditions for a deep rupture in its discursive foundations. As the certitudes of productivism begin to fracture under such internal scrutiny, it becomes more possible to open up spaces for critiquing productivism in VPE and imagining alternative constructions. Further, as the worker–learner subjects of VPE increasingly encounter contradictions and experience disjunctions between the dominant discourse and lived realities of productivism, the potential for reflexive resistance expands.

VPE and Work

While productivism and its training-for-growth assumption in VPE are creaking under the weight of their own internal contradictions, the associated ideology of work and skills-for-work assumption in VPE are also under increasing strain in post-industrial risk society. The prevalence of precarious employment, economic inequality and social insecurity facilitated by neoliberalism suggests that productivism has reached the point where its anti-human effects are so significant that new vocational and professional identities and forms of livelihood other than paid employment, must now be embraced and valued. As Gorz (1994, p.46) observes:

In actual fact, for almost half the active population, the ideology of work is a bad joke and identification with work an impossibility, since the economic system has no need—or regular need—of their capacities. The reality disguised by extolling ‘human resources’ or the work of the new skilled industrial personnel is that stable, full-time, year-round employment throughout an entire lifetime is becoming the privilege of a minority, and that for almost half of the active population, work no longer takes the form of an occupation which integrates them into a productive community and defines their place in society.

Similarly, a report for the OECD notes that “the role of (paid) work ... is coming to play a very minor role in human life, and badly distributed at that” (Pair 1994, p.16, parentheses added). Moreover, the work ethic of wage-based society is becoming increasingly discordant not only for precariously employed and unemployed people, but also for those in full-time jobs as “It is no longer true ... that producing more will lead to a better life” (Gorz 1989, p.220). For Giddens (1994, p.177), “The objective of full employment ... makes little sense any more. The questions now are different. Employment under what conditions? And what relation should work have to other life values?”.

The concept of work as paid employment is even less relevant in the context of developing countries. Lawrence (1997) suggests that the traditional concept of a ‘job’ in development programs is “endangered” as “a substantial proportion of the world’s labour force has never had *a job* in the ... contractual or regularized sense of the term”. Often the relative few with full-time employment in the South do not earn enough to sustain their livelihoods, let alone their families, due to inadequate and declining wages. Moreover, even if economic growth was sufficient to create more jobs, the fact remains that most existing patterns of production and consumption are unsustainable. The implications for education are “critical, since educating for

‘jobs’ ... while often controversial in the past, is today increasingly challenged by the need to build human capacity not only for employability, but for broader lifelong learning as well as for adaptive and ‘coping’ livelihood strategies in a fast-moving and complicated world” (Lawrence 1997). In both developed and developing countries, therefore, the legitimacy of productivism and its skills-for-work assumption in VPE is increasingly fragile as they are both based on a normative model of work (and indeed, vocation and profession) that is unattainable for many, socially unjust and ecologically unsustainable.

Ultimately, as with our normative modes of economic development, the epistemic foundations of our inherited, socially constructed and historically contingent concept of work may need to be dismantled and reconstructed anew. The planet cannot continue to support strong anthropocentric and dualistic forms of work that commodify, alienate and exploit human beings and non-human life forms. Beck (2000, p.65) argues that “only a focus on the nature-destroying aspect of work could change the foundations of the work society in a meaningful direction that was up to the tasks of the future”. In the wake of such a critique, it would be necessary to conceive and create radically new forms of work and workplaces. Consideration should be given to ways in which work could be reconstituted within the framework of more collective, decommodified and sustainable livelihood systems that reintegrate and reharmonize human beings with their socio-cultural and natural life-worlds; underpinned by a recognition of the natural-material limits and conditions for survival. Initially, new work forms could be based on already existing alternatives—such as unpaid, subsistence and community work in the informal economy—in conjunction with redistributed paid employment and redesigned education and social security systems to support sustainable livelihoods. Shorn of its productivist assumptions and reductive economic rationality, VPE has the potential to contribute to such a critique and reconceptualization of work and human development, and to reorient itself accordingly.

Conclusion

From its emergence some two centuries ago, productivism has presided over the development of the institution of VPE around the globe. Over this time, VPE has become the key agency for producing skilled and certified workers, the human resources for business, government, industry and economic growth. Recently elevated to the status of Education Gospel, the training-for-growth and skills-for-work assumptions continue to be reproduced systematically through VPE, despite their adverse social and environmental consequences, and even though they no longer afford a meaningful and sustainable basis for human development in a post-industrial era marked by profound risk and uncertainty. VPE is implicated in the allied process of neoliberalization and its global, negative-sum game of national economic competitiveness, which ignores the ecological limits and costs of training-for-growth and the increasingly problematic status of skills-for-work. Its subjects are largely trained and disciplined to follow the piper and dance to his tune.

In the process, however, the reproductive function of VPE has eclipsed its mission to engage in a searching critique of the predominant truth-claims and

common sense of our time. As the human species faces a more unpredictable and hazardous future, due in significant part to human-induced climate change and environmental damage, VPE has a social, intellectual and ethical obligation to confront the ecological question. In doing so, it should reconsider its relationships with the economy, society and environment within the framework of an ecological rationality that inverts the logic of productivism and recognizes the natural–material limits and contradictions of growth. Open and reflexive debate about alternative life values and modes of development is required with a view to developing new approaches to working and learning for sustainable development and global citizenship. Only then might worker–learners become more knowledgeable, skilful and adaptable in ecological terms, more mindful of their responsibilities to protect, conserve and renew natural life sources, and more capable of shaping their own livelihoods and collective ecological destiny in democratic, equitable and sustainable ways.¹⁵

VPE intersects with many of the key dimensions of change that the Stern Review (2006) and numerous other reports identify as necessary responses to climate change and environmental degradation, not least the far-reaching cultural transformation that is required in the workplace and beyond. All such reports suggest the need for a fundamental shift in our ways of producing and consuming; and, by implication, in how we become producers and consumers and the role of education in this process. As a principal site of subjectivity formation, and one that has been historically constituted by productivism, VPE must therefore reflect critically upon its own origins, assumptions and purposes in order to adapt to its changing landscape and prepare its learners for alternative, post-productivist futures.

Acknowledgments I wish to acknowledge the thoughtful responses to an earlier draft of this paper by colleagues in the Centre for Work and Learning Studies at Monash University, especially Dr Gail FitzSimons whose feedback was invaluable. The constructive criticism and suggestions of the anonymous reviewers were also helpful, although the author bears sole responsibility for the final version.

References

- Anderson, D. (2006). *Trading places: The impact and outcomes of market reform in vocational education and training*. Adelaide: National Centre for Vocational Education Research.
- Anderson, D. (2008a). Productivism and ecologism: Changing dis/courses. In R. Maclean, M. G. Park, & J. Fien (Eds.) *Work, learning and sustainable development: Opportunities and challenges*. Dordrecht: Springer.
- Anderson, D. (2008b). TVET and ecologism: Charting new terrain. In R. Maclean, M.-G. Park, & J. Fien (Eds.) *Work, learning and sustainable development: Opportunities and challenges..* Dordrecht: Springer.
- Anderson, D., Brown, M., & Rushbrook, P. (2004). Vocational education and training. In G. Foley (Ed.) *Dimensions of adult learning: Adult education and training in a global era* (pp. 234–250). Crows Nest, NSW: Allen & Unwin.

¹⁵ An alternative philosophical–discursive framework and strategic–practical responses to the ecological question are outlined in Anderson (2008a) and Anderson (2008b) respectively. Although both papers specifically address technical and vocational education and training, many of the proposed principles and strategies are also pertinent to higher-professional education.

- Angus, L., & Seddon, T. (2000). The social and organisational renorming of education. In T. Seddon, & L. Angus (Eds.) *Beyond nostalgia: Reshaping Australian education*. Camberwell, Victoria: Australian Council for Educational Research.
- Argüelles, A., & Gonczi, A. (Eds.) (2000). *Competency based education and training: A world perspective*. Mexico City: Grupo Noriega Editores.
- Atchoarena, D. (1998). Alternatives for the financing of vocational training: The example of emerging countries in Latin America. *Vocational Training European Journal*, 1(13), 56–66.
- Australian National Training Authority. (1996). *Developing the training market of the future: A consultation paper*. Brisbane: Australian National Training Authority.
- Beach, D., & Carlson, M. (2004). Adult education goes to market: An ethnographic case study of the restructuring and reculturing of adult education. *European Educational Research Journal*, 3(3), 673–691.
- Beck, U. (1992). *Risk society: Towards a new modernity*. London: Sage.
- Beck, U. (1996). Risk society and the provident state. In S. Lash, B. Szerszynski, & B. Wynne (Eds.) *Risk, environment and modernity* (pp. 27–43). London: Sage.
- Beck, U. (2000). *The brave new world of work*. Cambridge: Polity.
- Bennell, P. (1996). Privatization, choice and competition: The World Bank's reform agenda for vocational education and training in sub-Saharan Africa. *Journal of International Development*, 8(3), 467–87.
- Bennell, P., Bandera, S., Kanyenze, G., Kimambo, E., Kiwia, S., Mbiriyakura, T., Mukyanuzi, F., Munetsi, N., Muzulu, J., Parsalaw, W., & Temu, J. (1999). Vocational education and training in Tanzania and Zimbabwe in the context of economic reform, Education Research Paper no.28, London: Department for International Development. Available at <http://www.dfid.gov.uk/pubs/files/vocedtanzimeditpaper28.pdf>. Retrieved 29 Mar 2007.
- Bennett, N., Dunne, E., & Carre, C. (1999). Patterns of core and generic skill provision in higher education. *Higher Education*, 37, 71–93.
- Billing, D. (2003). Generic cognitive abilities in higher education: An international analysis of skills sought by stakeholders. *Compare*, 33(3), 335–350.
- Boughton, B. (2007). Researching workplace learning and class. *The Economics and Labour Relations Review*, 17(2), 157–164.
- Cho, M. K., & Apple, M. W. (1998). Schooling, work and subjectivity. *British Journal of Sociology of Education*, 19(3), 269–290.
- Clark, J. (2003). To Hell in a Handcart: Educational Realities, Teachers' Work and Neo-liberal Restructuring in NSW TAFE. PhD thesis, The University of Sydney, Available from <http://ses.library.usyd.edu.au/handle/1123/590>. Retrieved 18 Aug 2007.
- Conference Board of Canada (2000). Employability Skills 2000+. Available from <http://www.conferenceboard.ca/education/learning-tools/pdfs/esp2000.pdf>. Retrieved 2 Apr 2007.
- Coulter, R. P., & Goodson, I. F. (Eds.) (1993). *Rethinking vocationalism: Whose work/life is it?* Toronto: Our Schools/Our Selves Education Foundation.
- de Moura Castro, C. (1998). The stubborn trainers vs the neoliberal economists: Will training survive the battle? Inter-American Development Bank. Available from http://www3.iadb.org/sds/SCI/publication/publication_103_12_e.htm. Retrieved 2 Apr 2007.
- de Moura Castro, C. (2001). Training in the developing world: Issues and policies. Keynote address, Inter-American Development Bank and Faculdade Pitgoras. Available from http://scholar.google.com/scholar?hl=en&lr=&q=cache:b_JW137JzFJJ:iveta.itweb.org/KeynoteSpeeches/Claudio%2520di%2520Moura%2520Castro.doc++%22Training+in+the+developing+world+issues+and+policies%22. Retrieved 8 Feb 2007.
- de Silva, S. (1997). Human resources development for competitiveness: A priority for employers. (Paper presented at the ILO Workshop on Employers' Organizations in Asia-Pacific in the Twenty-First Century, Turin, Italy, 5–13 May). Available from <http://www.ilo.org/public/english/dialogue/actemp/papers/1998/srshrd.htm>. Retrieved 27 Mar 2007.
- Dippo, D. (1998). An ethic of sustainability for work education. *Journal of Vocational Education Research*, 23(4), 325–38.
- Elson-Rogers, S., & Westphalen, S.-A. (2000). Funding continuing vocational training in the European Union. *Journal of Vocational Education and Training*, 52(4), 687–708.
- European Commission. (2003). Tuning Educational Structures in Europe. A pilot project supported by the European commission in the framework of the Socrates programme. Available from http://ec.europa.eu/education/policies/educ/tuning/tuning_en.html. Retrieved 18 Aug 2007.
- Finkelstein, N. D., & Grubb, W. N. (2000). Making sense of education and training markets: Lessons from England. *American Educational Research Journal*, 37(3), 601–31.

- Finn, B. (1991). *Young people's participation in post-compulsory education and training. Report of the Australian education council review committee*. Canberra: AGPS.
- Flannery, T. (2007). *An explorer's notebook: Essays on life, history and climate*. Melbourne: Text.
- Foucault, M. (1972). *The archaeology of knowledge and the discourse on language*. New York: Pantheon Books.
- Foucault, M. (1980). *Power/knowledge: Selected interviews and other writings, 1972–1977*. Brighton: Harvester.
- Foucault, M. (1982). The subject and power. In H. L. Dreyfus, & P. Rabinow (Eds.) *Michel Foucault: Beyond structuralism and hermeneutics*. Brighton: Harvester.
- Foucault, M. (1988). *Technologies of the self: A seminar with Michel Foucault*. Amherst: University of Massachusetts Press.
- Gao, X., Su, Z., & Hu, X. (2006). Managing vocational institutional transformation: A Chinese case study. *Research in Post-Compulsory Education*, 11(1), 49–63.
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford, Calif.: Stanford University Press.
- Giddens, A. (1994). *Beyond left and right: The future of radical politics*. Cambridge: Polity/Blackwell.
- Gill, I. S., Fluitman, F., & Dar, A. (2000). *Vocational education and training reform: Matching skills to markets and budgets*. Washington DC: World Bank/Oxford University Press.
- Gorz, A. (1989). *Critique of economic reason*. London & New York: Verso.
- Gorz, A. (1994). *Capitalism, Socialism, Ecology*. Verso: New York.
- Green, A. (1990). *Education and state formation*. Basingstoke: Macmillan.
- Green, A. (1997). *Education, globalization and the nation state*. Basingstoke: Macmillan.
- Green, A. (1998). Core skills, key skills and general culture: In search of the common foundation in vocational education. *Evaluation and Research in Education*, 12(1), 23–43.
- Green, A. (1999). Education and globalization in Europe and East Asia: Convergent and divergent trends. *Journal of Education Policy*, 14(1), 55–71.
- Greenaway, H. (1973). Future problems in the employment of graduates. *Higher Education*, 2, 273–274.
- Greiner, W.-D. (Ed.) (2004). Towards a History of Vocational Education and Training (VET) in Europe in a Comparative Perspective, vol.1. Proceedings of the first international conference, October 2002, Cedefop Panorama Series 103, Luxembourg: Office for Official Publications of the European Communities.
- Greiner, W.-D. (Ed.) (2005). Mass vocational education and training in Europe: Classical models of the 19th century and training in England, France and Germany during the first half of the 20th Century. Cedefop Panorama Series 118, Luxembourg: Office for Official Publications of the European Communities.
- Grubb, W. N. (2004). The Anglo-American approach to vocationalism: The economic roles of education in England, Research Paper 52, SKOPE Publications, University of Warwick. Available from <http://www.skope.ox.ac.uk/WorkingPapers/SKOPEWP52.pdf>. Retrieved 9 Jan 2007.
- Grubb, W. N. (2005). The education gospel: The economic power of schooling. Speaker's series, center for cities and schools, university of California, Berkeley. Available from http://citiesandschools.berkeley.edu/pdf/2005_Spring_CC&S_Norton_Grubb.pdf. Retrieved 29 Dec 2006.
- Grubb, W. N., & Lazerson, M. (2004). *The education gospel: The economic power of schooling*. Cambridge, MA: Harvard University Press.
- Grubb, W. N., & Lazerson, M. (2005). Vocationalism in higher education: The triumph of the education gospel. *The Journal of Higher Education*, 76(1), 1–25.
- Hackl, E. (2001). Towards a European area of higher education: Change and convergence in European higher education. RSC No.2001/09, European University Institute. Available from http://www.iue.it/RSCAS/WP-Texts/01_09.pdf. Retrieved 16 Aug 2007.
- Halsey, A., Lauder, H., Brown, P., & Stuart Wells, A. (1997). *Education: Culture, economy and society*. Oxford: Oxford University Press.
- Harvey, L. (2000). New realities: The relationship between higher education and employment. *Tertiary Education and Management*, 6, 3–17.
- Harvey, D. (2005). *A brief history of neoliberalism*. Oxford: Oxford University Press.
- Hyland, T. (1994). *Competence, education and NVQs: Dissenting perspectives*. London: Cassell.
- Intergovernmental Panel on Climate Change, IPCC. (2007). Climate change 2007: Summary for policymakers of the synthesis report of the IPCC fourth assessment report. Available from <http://www.ipcc.ch/>. Retrieved 17 Nov 2007.
- ILO. (2002). Learning and training for work in the knowledge society, Report IV (1), International Labour Conference, 91st Session, Geneva. Available from <http://www.ilo.org/public/english/standards/relm/ilc/ilc91/pdf/rep-iv-2.pdf>. Retrieved 25 Nov 2006.

- ILO. (2004). Recommendation concerning human resources development: Education, training and lifelong learning, Recommendation 195. Adopted by the Conference at its 92nd Session, Geneva. Available from http://www.ilo.org/public/english/employment/skills/hrdr/rec/r_main_4.htm. Retrieved 4 Jan 2007.
- ILO. (2007). Human resources development recommendation database. Available from http://www.ilo.org/public/english/employment/skills/hrdr/instr/ins_top.htm#National. Retrieved 4 Jan 2007.
- Jackson, N. (Ed.) (1991). *Skills formation and gender relations: The politics of who knows what*. Deakin University Press: Geelong, Victoria.
- Jones, P. W. (1997). On World Bank education financing. *Comparative Education*, 33(1), 117–29.
- Kell, P. (1992). Skills formation and TAFE: An alternative view for research. *Australian Journal of TAFE Research and Development*, 8(1), 33–46.
- Kelly, G. P., & Slaughter, S. (Eds.) (1991). *Women's higher education in comparative perspective*. Dordrecht: Kluwer Academic Publishers.
- Kincheloe, J. L. (1995). *Toil and trouble: Good work, smart workers, and the integration of academic and vocational education*. New York: Peter Lang.
- Kivinen, O., & Ahola, S. (1999). Higher education as human risk capital. *Higher Education*, 38, 191–208.
- Kliebard, H. M. (1999). *Schooled to work: Vocationalism and the American curriculum 1876–1946*. New York: Teachers' College Press.
- Lawrence, J. (1997). Adult education and jobs, or sustainable livelihoods?, Presentation at UNESCO Panel on Changes in the World of Work, CONFITEA V, Hamburg, July 12. Available from <http://www.cse.mrt.ac.lk/lecnotes/cs5171/texts/CONFINTE-PAP2000.pdf>. Retrieved 7 Jan 2007.
- Levin, J. S. (2001). *Globalizing the community college. strategies for change in the twenty-first century*. New York: Palgrave.
- Marginson, S. (1993). *Education and public policy in Australia*. Melbourne: Cambridge University Press.
- Marginson, S. (1997). *Markets in education*. St Leonards, NSW: Allen & Unwin.
- Marshall, A. ([1890]1949). *Principles of economics*. London: Macmillan.
- McKenzie, D. (1979). The role of the technical college. In D. McKenzie, & C. Wilkins (Eds.) *The TAFE papers* (pp. 78–85). South Melbourne: Macmillan.
- Middleton, J., Ziderman, A., & Van Adams, A. (1993). *Skills for productivity: Vocational education and training in developing countries*. Oxford and Washington DC: Oxford University Press/World Bank.
- Mok, K.-H. (1999). Education and the market place in Hong Kong and Mainland China. *Higher Education*, 37, 133–158.
- Mulder, M., Weigal, T., & Collins, K. (2007). The concept of competence in the development of vocational education and training in selected EU member states: A critical analysis. *Journal of Vocational Education and Training*, 59(1), 67–88.
- OECD. (1982). *The future of vocational education and training*. Paris: OECD.
- OECD. (1987). *Structural adjustment and economic performance*. Paris: OECD.
- OECD. (1989a). *Alternatives to universities in higher education*. Paris: OECD.
- OECD. (1989b). *Education and the economy in a changing society*. Paris: OECD.
- OECD. (1996). *Lifelong learning for all*. Paris: OECD.
- OECD. (1998). *Redefining tertiary education*. Paris: OECD.
- OECD. (2002). *Beyond rhetoric: Adult learning policies and practices*. Paris: OECD.
- OECD. (various years). *Education at a glance. OECD indicators*. Paris: OECD.
- Okolie, A. C. (2003). Producing knowledge for sustainable development in Africa: Implications for higher education. *Higher Education*, 46, 235–260.
- Orr, D. W. (1992). *Ecological literacy: Education and transition to a postmodern world*. Albany, N.Y.: State University of New York Press.
- Pair, C. (1994). The Changing Role of Vocational and Technical Education and Training (VOTEC). Context, Actors, Challenges, OECD, ERIC No.ED387650. Available from http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/22/e1/40.pdf. Retrieved 27 Mar 2007.
- Penn, R. (1999). The dynamics of decision-making in the sphere of skills' formation. *Sociology*, 33(3), 621–638.
- Reid, A., & Petocz, P. (2006). University lecturers' understanding of sustainability. *Higher Education*, 51, 105–123.
- Rose, P. (2003). From the Washington to the post-Washington consensus: The influence of international agendas on education policy and practice in Malawi. *Globalisation, Societies and Education*, 1(1), 67–86.
- Singh, M. (2001). Reflections on colonial legacy and dependency in Indian vocational education and training (VET): A societal and cultural perspective. *Journal of Education and Work*, 14(2), 209–225.

- Stern, N. (2006). The Economics of Climate Change. Available from http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm. Retrieved 7 Nov 2006.
- Stevenson, J. (1993). Competency-based training in Australia: An analysis of assumptions. *Australian and New Zealand Journal of Vocational Education Research*, 1(1), 87–104.
- Stevenson, J. (1994). Interests in post-compulsory education and training: Vested or community-based. *Australian and New Zealand Journal of Vocational Education Research*, 2(1), 102–120.
- St George, E. (2006). Positioning higher education for the knowledge based economy. *Higher Education*, 52, 589–610.
- Suchodolski, B. (1974). The future of higher education. *Higher Education*, 3(3), 331–340.
- Teichler, U. (1999). Research on the relationships between higher education and the world of work: Past achievements, problems and new challenges. *Higher Education*, 38, 169–190.
- Teixeira, P., Joengbloed, B., Dill, D., & Amaral, A. (2004). *Markets in higher education. rhetoric or reality*. Dordrecht: Kluwer.
- Tynjälä, P., Välimaa, J., & Sarja, A. (2003). Pedagogical perspectives on the relationships between higher education and working life. *Higher Education*, 46, 147–166.
- UK National Council for Vocational Qualifications (1991). *General national vocational qualifications*. London: National Council for Vocational Qualifications.
- UK Secretary of State for Education and Skills. (2003). 21st century skills: Realising our potential, DfES, London. Available from <http://www.dfes.gov.uk/skillsstrategy/uploads/documents/21st%20Century%20Skills.pdf>. Retrieved 1 Apr 2007.
- United Nations Environment Programme. (2007). Global Environmental Outlook Year Book. An overview of our changing environment. Available from <http://www.unep.org/geo/yearbook/yb2007/>. Retrieved 27 Oct 2007.
- US Department of Labor (1991). What work requires of schools: A SCANS report for America 2000. The secretary's commission on achieving necessary skills. Available from <http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf>. Retrieved 24 Mar 2007.
- van der Klink, M., Boon, J., & Schlusmans, K. (2007). Competences and vocational higher education: Now and in future. *European Journal of Vocational Training*, 1(40), 67–82.
- Warren, K. J. (Ed.) (1997). *Ecofeminism: Women, culture, nature*. Bloomington: Indiana University Press.
- Watkins, P. (1987). *An analysis of the history of work*. Canberra: Curriculum Development Centre.
- Watson, K. (1994). Technical and vocational education in developing countries: Western paradigms and comparative methodology. *Comparative Education*, 30(2), 85–97.
- Weber, M. (1930). *The protestant ethic and the spirit of capitalism*. London: Unwin.
- Weigal, T., Mulder, M., & Collins, K. (2007). The concept of competence in the development of vocational education and training in selected EU member states. *Journal of Vocational Education and Training*, 59(1), 53–66.
- West, A., Sparkes, J., Balabanov, T., & Elson-Rogers, S. (2000). Demand-side financing—a focus on vouchers in post-compulsory education and training: discussion paper and case studies. Cedefop: Thessaloniki. Available from http://www2.trainingvillage.gr/etv/publication/download/panorama/6003_en.pdf. Retrieved 8 Jan 2007.
- Whitston, K. (1998). Key skills and curriculum reform. *Studies in Higher Education*, 23(3), 307–319.
- Williams, C. (2005). The discursive construction of the ‘competent’ learner-worker: From key competencies to ‘employability skills’. *Studies in Continuing Education*, 27(1), 33–49.
- Winberg, C. (2006). Undisciplining knowledge production: Development driven education in South Africa. *Higher Education*, 51, 159–172.
- Winterton, J., Delamare-Le Deist, F., & Stringfellow, E. (2005). Typology of knowledge, skills and competencies: Clarification of the concept and prototype. Research Report on behalf of Cedefop: Thessaloniki. Available from http://www.ecotec.com/europeaninventory/publications/method/CEDEFOP_typology.pdf. Retrieved 8 Jan 2007.
- World Bank (1991). *Vocational and technical education and training. A world bank policy paper*. Washington, DC: World Bank.